Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

of contacts I and II, with the naked eye, the effective magnifying power of the telescope being about 50; contacts III and IV were observed in the same way except that a hand magnifier of a little more than 3 inches focus was used, giving a power of about 140. The aperture of the photoheliograph was 3 inches.

Corrections to the Lick Observatory Railway Time-Signal. By Mr. TUCKER.

November 9, at noon, correction to P. S. T. = $-0^s.03$.
November 10, at noon, correction to P. S. T. = $+0^s.11$.

As this clock was used in part of the observations the rate was not changed during the interval.

Photographs of the Transit with the Photoheliograph. By Professor SCHAEBERLE and Mr. PERRINE.

Thirty-eight negatives of the transit were taken with the photoheliograph. Not all of them are developed at the time of writing. Those that have been examined are all suitable for measurement.

PICTURE OF THE GREAT METEOR OF JULY 27, 1894.

The excellent cut of the meteor of July 27, 1894, is copied from a water-color sketch made by Mr. CHAUNCEY M. ST. JOHN, which has been presented to the LICK Observatory by the artist. It is an exceedingly faithful and artistic representation of the meteor and will serve to recall the phenomenon to all who saw it from the neighborhood of Oakland, etc. It is here printed facing page 268. E. S. H

CORRECTIONS TO HUSSEY'S LOGARITHMIC TABLES.

In the second edition, log. sin 37° 4′ should be 9.78013. The characteristic of log. sin 79° should be 9. These are the only numerical errors that have been reported in the first 145 pages of the book. In a few cases type of wrong font have been used; this, however, will not lead to errors in computation. On page 146, line 25, $497''.78$ should be $497^s.78$; and, on page 148, the velocity of light should be 29.9853 km. per second. The value of the centimetre in inches is given, on page 146, as 39370432. This is CLARKE'S value. It has been shown that the last three decimal places of this value are very uncertain.

The Bureau of Weights and Measures of the United States Coast and Geodetic Survey has provisionally adopted the value .393700. If this value were assumed instead of CLARKE'S some of the metric equivalents on pages 146–8 would have slightly different values. W. J. HUSSEY.

STANFORD UNIVERSITY, 1894, November 19.

THE CHEMICAL CONSTITUTION OF *MARS'* ATMOSPHERE,

BY DR. HENRY H. BATES.

[The following private letter from one of the members of the Society is interesting; and especially so if read in connection with the article by Professor CAMPBELL (*Concerning an Atmosphere on Mars*), printed in this number of the *Publications*. It is proper to say that the conclusions which Dr. BATES has independently reached have been suggested and discussed by others. Professor SCHIAPARELLI, Mr. A. COWPER RANYARD and others have printed papers or paragraphs on the subject; and the general question of a substitute of other chemical compounds for water has been considered for some time past in the LICK Observatory. E. S. H.]

"PROFESSOR E. S. HOLDEN, Director LICK Observatory.

"I was very much impressed with the * * * paper by Mr. CAMPBELL on the spectrum of *Mars*, reported in No. 37 of the *Publications* A. S. P. This * * * seems to entirely negative former impressions as to evidence of aqueous vapor on *Mars*. Mr. CAMPBELL himself seems to have worked under a foregone conclusion opposed to his proofs, which makes his work all the more trustworthy. It is a remark at the close of his paper that I wish to question. He considers, with many others, that 'the polar caps on *Mars* are conclusive evidence of an atmosphere *and aqueous vapor*.' Is not this putting it very strongly in the absence of all positive evidence and in the face of the powerful adverse negative evidence? The only reason for believing in the presence of aqueous vapor on *Mars*, is the waxing and waning of the white polar caps under the Sun's apparent influence, in analogy with those of our planet.

"But why assume snow or ice? It seems incredible from *Mars'* small size and great distance from the Sun, and relatively scant atmosphere, that it can have sufficient contained heat, or can receive sufficient heat from any source to liquefy ice, even if it ever had an aqueous atmosphere. The amount of solar heat received is calculable and is insufficient. The temperature of *Mars* at the